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ABSTRACT

A proportionate stratified random sample of undergraduates, graduate students, and professional school students at the University of Chicago was interviewed to determine the extent to which they were aware of the Regenstein Library's reference services. A rather low level of awareness of reference services was found throughout the student body. Academic disciplines, level of study, and length of time at the university all affected awareness of and desire for reference services. Those students who had discovered and consulted the reference staff were generally pleased with the assistance they received. Data tables and a bibliography are included. (Author/LS)

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THE UNIVERSITY OF CHICAGO

STUDENT AWARENESS AND USE OF REFERENCE SERVICES IN A LARGE UNIVERSITY LIBRARY

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE LIBRARY SCHOOL
IN CANDIDACY FOR THE DEGREE OF
MASTER OF ARTS

BY

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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CHICAGO, ILLINOS

JUNE, 1976

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ABSTRACT

Little work has been done to determine why students who do not use their academic libraries' reference and information services fail to do so, and there has been little study of students' awareness of such services. I interviewed a proportionate stratified random sample of undergraduates, graduate students, and professional school students at the University of Chicago to determine the extent to which they are aware of the Regenstein Library's reference services and to ascertain which services the students would find most useful. A rather low level of awareness of reference services was found throughout the student body; academic discipline, level of study, and length of time at the university all affected awareness of and desire for reference services. Those students who had discovered and consulted the reference staff, however, were generally pleased with the assistance they received.

CHAPTER I

INTRODUCTION

Many studies have been carried out concerning communication problems in reference work; they emphasize negotiating questions and overcoming communication barriers between a reference librarian or information specialist and a library patron. Very little, however, has been written about the library user or non-user who never gets as far as the reference desk. It is distressing that misunderstanding, ignorance, or ill-feeling may prevent people who could profit by the help of the reference staff from consulting them. Some members of a university community who never use their library's reference services may, in fact, not need to do so, or they may have found through past experience that their library's staff cannot help them with their reference problems. It is also possible, however, that some people don't consult the reference desk because they are sensitive about admitting ignorance or confusion by asking a question, or else because they are not aware that reference or information services exist and that they are entitled to use them.

My impression, gained from experiences both as a student and as a library staff member, is that many students at the University of Chicago do not know what services are avail-

able from the Regenstein Library Reference Department, and, indeed, that some students are totally unaware of the existence of such a department. To determine whether this suspicion has any foundation, I designed and carried out a survey of undergraduates, graduate students, and professional school students to determine to what extent these students were aware of various services provided by the reference department and to ascertain which services students believe to be most useful. I also collected information about the students' use of the Regenstein and other libraries and their use of the reference service, as well as such personal data as academic program and level of study; this information allowed me to investigate possible relations between knowledge of available reference services and other variables.

I found a surprising lack of knowledge about the Regenstein's reference services throughout the student body. Students were generally aware of only a little over half of the services available to them. Thirty-four percent of the students questioned had never consulted the reference department, and eighteen percent did not know where it was. Many people expressed a desire for services which are currently being provided but which they did not realize already exist--so many, in fact, that if everyone were aware of these services, the reference staff at its present size would be wholly incapable of dealing with the increase in demand. For example, the department would receive almost twice as many incoming telephone calls from students if everyone who wanted to ask for information

over the telephone knew that he could do so. Although some groups or catagories of students were better informed than others, the level of awareness of reference services throughout the student body was generally low. Students' accounts of the ways in which they learned of the existence of the reference department suggest that the library's handbook and other printed directional materials are not effective in informing most people about the department, nor are signs or graphics in the library. Students' evaluatory comments, however, reveal that those who have discovered and made use of the department feel favorably about the services, collection, and staff that they encountered.

CHAPTER II

EARLIER WORK

There have been previous attempts to determine reasons for non-use of reference services and to ascertain users' awareness of these services. "Why Don't They Ask Questions?"[1] by Mary Jane Swope and Jeffrey Katzer describes a study carried out at Syracuse University in 1972; one hundred and sixty people in Syracuse's Carnegie Library were approached, asked whether they had a "question," asked if they would take that question to a reference librarian, and if they would not, they were asked why not. The article unfortunately never explains clearly what is meant by "having a question," and what precautions were taken to ensure that all the respondents and the investigators understood that term to mean the same thing. This unexplained phrase might have caused confusion among the respondents as well as among those who try to understand the implications of the study. The people questioned were selected randomly from the card catalog area, the reference room-index area, and the open stacks, since it was felt that these areas would be more likely than other parts of the library to contain users with "questions." The sample is biased in that it is

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[1]Mary Jane Swope and Jeffrey Katzer, "Why Don't They Ask Questions?" RQ 12 (Winter 1972): 161-166.

most likely that heavy users of the library would be approached and certainly impossible that non-users of the library be approached. Similarly, if the researchers were correct in believing that the areas in which they sought respondents had a higher density of people with problems, then it is hard to see how their results can be extrapolated to the general population of library users. Nonetheless, some of the conclusions of the study were quite suggestive. Swope and Katzer write that 41 percent of the respondents had "questions," and of those people, that 65 percent would not ask a librarian for help. The three most frequently given reasons for avoiding the reference staff were dissatisfaction with past service (ten people), a feeling that the question was "too simple" for the librarian (seven people), and a feeling that they should not "bother" the librarian (seven people). The last two catagories suggest that there may be substantial numbers of people who need help in using a library but who do not realize that there is a department in the library whose responsibility it is to help them, or who at least are uncertain about the sort of help they could request. It is possible, however, that this result in part reflected differences in interpretation of what was meant by "having a question," which is not necessarily the same thing as "being in need of assistance." In a subsequent letter to RQ,[1] Jeffrey Katzer calls for further, more extensive study of reasons for such non-use.

Some of Swope and Katzer's findings are similar to those

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[1]Jeffrey Katzer, Letter to the Editor, RQ 14 (Fall 1974): 86-88.

of a study done ten years earlier at Southampton University.[1] In May, 1962, 201 written questionnaires were sent out to a stratified sample of undergraduate students, 187 of whom completed and returned them. The questionnaire recorded students' extent and type of library use, methods of doing research in the library, and attitudes about many of the library's services and staff. Thirty-nine percent of the students who completed the questionnaire said that they were reluctant to put queries to the library staff; first year students expressed more reluctance than second or third year students, and there were differences among the different academic disciplines as well. "Of those students who expressed reluctance to put queries, 70 percent felt their question was too elementary, 23 percent thought the staff appeared too busy to deal with it, and 12 percent thought they would probably not be able to help."[2] When asked whether the library staff could help with a "subject query" which a student was not sure how to begin or pursue efficiently, 51 percent replied that the possibility had never occurred to them; again first year students were less likely to approach the staff than second and third year students. At Southampton, as at Syracuse University, there apparently was a group of students unaware of the existence of reference or information services or unsure about what to expect from such services.

A wider and more recent study of faculty awareness of

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[1]Maurice B. Line, "Student Attitudes towards the University Library: A Survey at Southampton University," Journal of Documentation 19 (September 1963): 100-117.

[2]Ibid., p. 111.

and attitudes towards their libraries' reference services was carried out by Jerold Nelson.[1] He sent questionnaires to a random sample of faculty members of six state colleges and universities in California: 1,067 were sent out and 73 percent were returned. Nelson listed thirteen services which a reference department might provide and asked the faculty members whether or not each service was provided by their own library, or whether they did not know whether or not it was. He also asked the respondents to indicate the degree to which they considered each service to be desirable, and whether they thought that it was provided to them at present: he found that "for nearly every service, there were individuals who desired the service without knowing that it was already being offered."[2] It is possible, however, that a respondent might consider a service "desirable" in general even though it was not useful to him personally. The average faculty member was aware of barely half of the services which were actually available at his library. Nelson's list of possible services incorporated some reference jargon or technical phrases, e.g., "vertical files," "demand bibliographies," "literature search," which may have been unclear to some respondents. On the other hand, some respondents, believing the question was intended to reveal facts about their library rather than test their familiarity with

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[1]Jerold Nelson, "Faculty Awareness and Attitudes toward Academic Library Reference Services: A Measure of Communication," College and Research Libraries 34 (September 1973): 268-75.

[2]Ibid., pp. 273-74.

library services, may have called their libraries and asked about the services available; these two effects may or may not have cancelled each other out, but they do weaken our confidence in the results. At any rate, the surprising proportion of faculty members who were found to be ill-informed about services offered by their own libraries is consistent with the Katzer and Swope findings, and does suggest a need for further research.

A study done two years ago at the University of Chicago Regenstein Library is of interest because it concerned some of the same groups of clientele as the present study. On February 20, 1974, a questionnaire was distributed to everyone who entered the Regenstein Library between 8:30 A.M. and 10:00 P.M. by a Student Committee on the Library.[1] This questionnaire was designed to measure users' attitudes towards various library policies and facilities: the user was asked how often he used each of several services (Entrance/Exit, Reference Area first floor, Reserve, Special Collections, Masterfile, Microfilms, Search/Trace, Recall, Card Catalog first floor, Canteen, and others), how he would rate the staff in each area, and his overall rating of each area. Unfortunately, the users' ratings of reference staff and their overall evaluations of the reference area were not included in the committee's report, but the report does note that the "average user," or at least the average user who was given and completed the questionnaire, appears

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[1]Student Advisory Committee on the Library, "Library Questionnaire," University of Chicago, 1974. (Mimeographed.)

at the reference desk about once a month. There was some feeling that the hours of reference service should be extended, but this was less of a priority to those questioned than buying more books and journals and expanding canteen facilities. It was also found that slightly over 25 percent of the respondents were undergraduates, and that graduate students in the social sciences and humanities were present in numbers much greater than their percentage of the total student body. Over 92 percent of those returning the questionnaire were University of Chicago students; the others were faculty members, staff, and visitors, in decreasing frequency. While this study did not address the issues in which I am interested specifically, it gives some insight about the activities and identity of the heavy users of the Regenstein Library.

CHAPTER III

METHODOLOGY

The Population

The Student Advisory Committee on the Library study, as well as less formal observations, shows that University of Chicago students constitute by far the largest group using the Regenstein Library. Since the research needs of faculty, staff, and visiting scholars are of great importance to the library staff, it would have been interesting to carry out a study of both the student body and the faculty, but time and resources did not permit such an undertaking. The problems involved in trying to win the cooperation of the already over-studied and over-interviewed group of professors were another consideration. Undergraduate, graduate, and professional school students, then, constitute the population being studied; practical considerations suggested that a sample of 100 to 150 students be interviewed.

There could be some question about including in the sample groups such as undergraduates, students in departments having their own separate libraries, and students in professional schools having their own libraries. I did include these catagories because the Regenstein general reference department is the "court of last resort" for reference problems for the

whole."[1] In other words, I wanted to learn not only what the student body as a whole knew about the library's reference services, but also what graduate students in the humanities, or undergraduates in the sciences, or students in the Business School, knew as well. Another advantage of stratification is "the reduction of variances of the sample results for the entire population . . . greater precision is obtained for the sample estimates, a constant goal of sample design."[2] A proportionate stratified random selection of elements has further advantages; if the sample is proportionate, that is, if the number of people in each sub-group is proportionate to the number of people in each group in the population, the sample is "self-weighting." "The term self-weighting denotes that in calculating the sample mean, the sample cases are simply added without any special weighting procedure . . . Proportionate stratified sampling of elements is often in the back of people's minds when they talk of 'representative sampling,' when they insist that the different parts of the population must be properly represented."[3] My strata were roughly proportionately represented, except for two sub-groups, the Divinity School and the Library School, which if sampled exactly proportionately to their numbers in the population would have had fewer than five people chosen to be interviewed; since it is a generally accepted rule of thumb to have at least five elements in each

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[1]Leslie Kish, "Selection of the Sample," in Research Methods in the Behavioral Sciences, ed. Leon Festinger and Daniel Katz (New York: Dryden Press, 1953), p. 192.

[2]Ibid., p. 191.

[3]Ibid., pp. 193-95.

sub-group, I increased those two groups to five members.

The population was divided into the following thirteen strata:

Freshmen and undergraduate students-at-large
Undergraduates in the humanities
Undergraduates in the social sciences
Undergraduates in the sciences
Graduate students in the humanities
Graduate students in the social sciences
Graduate students in the sciences
Business School
Divinity School
Law School
Medical School
Graduate Library School
School of Social Service Administration

Using the Registrar's alphabetical list, I associated each student with one of these strata by means of numerical codes used by the Registrar to indicate department and level of study. There were 7,940 people in the entire population; a sample of 1.5 percent of the population is 119 people, and a sample of 1.5 percent of each sub-group, with the numbers rounded off to avoid the necessity of interviewing .6 of a person, comprises 124 people. I chose a random sample of 1.5 percent of each subgroup by assigning each individual on the alphabetical list to a stratum, marking a distinct symbol for that stratum next to his name, choosing numbers from a random number table for the required number of subjects in each stratum, ordering the random numbers, and choosing the individuals whose positions on the list corresponded to the random numbers for each group. The size of each sub-group and the sample taken from it is shown in table 1, as is the number of people successfully interviewed in each group.

TABLE 1

SIZE OF EACH SUB-GROUP AND ITS SAMPLE

Subgroup	Number in Population	Number in Sample	Interviews Completed
Freshman	795	12	9
Undergraduates-Humanities .	418	6	3
Undergraduates-Sciences . .	620	9	7
Undergraduates-Social Sciences	640	10	8
Graduate Students-Sciences .	717	11	6
Graduate Students-Humanities	816	12	12
Graduate Students-Social Sciences	1377	21	18
Business School	846	13	9
Divinity School	266	5	4
Law School	474	7	6
Medical School	448	7	5
Graduate Library School . .	99	5	5
Social Service Administration	424	6	6
Total	7940	124	98

The Form of Interview

I originally considered collecting data with written questionnaires, since I could reach a large number of people more easily with them than with interviews, but I rejected this idea because it seemed unlikely that substantial numbers of this often-studied population would return questionnaires.

Also, with careful probing by the interviewer, personal interviews can elicit information in greater depth. The presence of an interviewer giving complete attention to the respondent's views insures a more complete response than a piece of paper which can be easily ignored. Robert L. Kahn and Charles F. Cannell have devoted an entire book essentially to explaining how an interviewer can motivate people effectively to participate in an interview;[1] they argue that a person-to-person interaction can be very effective in securing the interest and cooperation of someone who is not greatly interested in the subject in question. However, interviewing 124 people, some of whom live twenty miles from Chicago, would be difficult if the interviews were to be carried out in person at each respondent's home, so I decided to interview by telephone, which is considerably more convenient and still retains many of the advantages mentioned above of the personal interview. In fact, no one whom I reached on the telephone refused to be interviewed, although several requested that I call back at a more convenient time.

The Questions

I considered the wording of the questions to be a matter of great importance. Stanley L. Payne has shown in The Art of Asking Questions[2] that replacing words in a question by what

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[1]Robert L. Kahn and Charles F. Cannell, The Dynamics of Interviewing (New York: John Wiley and Sons, 1966).

[2]Stanley L. Payne, The Art of Asking Questions (Princeton: Princeton University Press, 1951).

seem to be synonyms can greatly influence the way people respond. Questions can be inadvertantly "loaded" to encourage certain answers, or, if they are unclearly worded, construed differently by different respondents. Questions which give a person a choice between two or more possible answers produce different results from "open" questions which make it necessary for him to form his own answer. Even changing the interviewer's stress on certain words in a spoken question can lead to different responses, although the "same" question is asked in each case. Questions which are intelligible on paper when read by an educated person are not necessarily intelligible when heard over the telephone; I found, after pretesting the questionnaire with a number of students, that some concepts had to be stated more simply to be understood in a telephone conversation. Although questions must be brief and clear for use under these circumstances, they still must not imply a "correct" or acceptable answer; for the purposes of this study especially, questions had to be phrased in a non-threatening way to make it possible for a student to admit a lack of knowledge or non-use of the library or its services. For example, the question, "Have you ever had occasion to use the reference department?" does not imply that the student is culpable if he has not; similarly, some people are more willing to say that they are "not sure" of something than that they "don't know." On the basis of these considerations and the experiences of pretesting, I constructed the following interview schedule:

Hello, are you (student's name)?

You have been selected to represent (student's sub-group) in a study on student library use. I am doing a study to find out how well the Regenstein Library makes its services known to its users. I am especially interested in finding out how much people know about the services of the reference department. Can I ask you a few questions about your experiences with the library?

1. Have you ever had occasion to use the Regenstein Library?

   Do you study there with your own books, or check out books, or do research, or what?

   How many times have you used the library over the last month?

   Do you usually use another library on campus or elsewhere?

2. At the Regenstein Library, is it hard to find the Reference Desk?

   Do you know where it is?

3. Have you ever had occasion to use the reference department before?

   How many times over the past month?

4. In your estimation, what does the reference department do?

5. I am going to ask you a list of questions about the services of the reference department. You can answer by saying "yes," "no," or "not sure." OK?

6. A. Will they help you use the card catalog if you're having trouble?

   Would it be useful to you personally if they did? Would you ever find that helpful?

   B. Will they help you use indexes, abstracts, and other reference books?

   Would that be useful to you personally?

   C. Will they direct you to reference tools somewhere else in the library?

   Would that be useful to you?

   D. Will they help you find addresses or phone numbers

of people or of institutions?

Would that be useful to you?

E. Will they help you find book reviews?

Would that be useful to you?

F. Will they help you find journals or periodicals in the library?

Would that be useful to you?

G. Will they put together a bibliography for your thesis, if you had to write a thesis?

Would that be useful to you?

H. Will they help find the answer to a factual question, like "How high is Mount Everest?" or "When did Illinois become a state?"

Would that be useful to you?

I. Will they answer questions over the phone?

Would that be useful to you?

J. Will they write a resume for you if you are looking for a job?

Would that be useful to you?

K. Will they find out if other libraries have the materials you're looking for, if Regenstein doesn't have them?

Would that be useful to you?

L. Will they give you a letter of introduction or a pass so that you can use other libraries?

Would that be useful to you?

M. Will they borrow materials from other libraries so that you can use them here--interlibrary loan?

Would that be useful to you?

N. Will they search machine-readable data bases for you at your expense?

Would that be useful to you?

O. Do they give orientation tours of the library?

Would that be useful to you?

Thank you very much.

7. Can you tell me how you learned about the existence of the reference department?

8. Are there any comments you would like to make about the reference service at Regenstein, or about the library in general? Any comments, complaints, horror stories, suggestions?

Thank you. You've been very helpful.

I chose the services listed above by examining journal literature on reference and information services and the library's publically available reader information bulletins and handbook. I learned through examining the reader information bulletins and handbook and by speaking with Mrs. Christine Longstreet, Head Reference Librarian, Mrs. Patricia Clatanoff, Assistant Reference Librarian, and other members of the reference staff, that all of the services except G (compilation of a bibliography for a thesis), J (resume-writing service), and N (search of machine-readable data bases at the user's expense), are provided at the Regenstein Library reference desk. We included three services that were not available to detect patterns of answering "yes" to every question; these three services sound plausible even though they are not provided by the reference department. In retrospect, it might have been a better idea to have included several more questions to which the correct answer is "no" and several fewer to which the correct answer is "yes." One complication that was unforeseen involved Billings Hospital's MEDLINE service; several medical students

and graduate students in the sciences answered question N, the question concerning machine-readable data bases, by refering to that service, and I decided to count such answers as correct since they indicated knowledge of an existing reference facility, although one not under the aegis of the reference department.

Carrying Out the Interviews

These interviews were carried out during the last two weeks of November and the first week of December, 1975. It was necessary to wait at least a month into the Fall Quarter in order to be able to ask people about their activities "over the past month." I decided that it was advisable to wait a little longer than that in order to get a representative time not including the very first weeks of the school year; this seemed especially important for interviews with students entering the university for the first time. It would have been impractical, on the other hand, to try to interview people during finals week; although the interview took only six to twelve minutes, depending on the loquacity of the respondent, students would be less likely to devote even that amount of time to an interview during the last week of the quarter.

Many of the students in the sample proved exceptionally difficult to reach by telephone. All but five had telephone numbers listed with the registrar; many of these, however, were hotel or apartment switchboards or dormitory phones, and by the time of the interview fully one-fourth of the numbers were no longer correct. Of the five people whose telephone numbers were

not on the registrar's list, two were successfully reached through telephone information; two others did not have a telephone and were interviewed in person, with every attempt being made to approximate the conditions and atmosphere of the telephone interviews; and the fifth person was never reached. A number of the people who appeared on the list were studying abroad, had a temporary leave of absence, had left school by the time of the attempted interview, or had apparently dropped off the face of the earth; 98 of the 124 were finally interviewed.

CHAPTER IV

RESULTS

The combined sample's answers to all questions are shown in tables 2, 3, 4, and 5. It is noteworthy that everyone in the sample answered "yes" to the first question: every student claims, in answer to a question put in a non-threatening way, to have used the Regenstein Library at least once. It appears from the survey that students either use the library a great deal or very seldom; few people are in the intermediate catagories. This result is different from that of the Student Advisory Committee study, which found a great deal of heavy use, some moderate use, and very little light use of the library: that study, however, was biased toward heavy users of the library because questionnaires were given only to people who entered the library. I have been unable to find for purposes of comparison, another study of frequency of library use which used use-frequency catagories comparable to mine.

Although everyone had used the Regenstein Library, a surprising 18 percent of the respondents did not know where the reference desk is. This conclusion withstood subsequent careful probing on the part of the interviewer: 22 percent answered "no" or "not sure" when asked if they knew where the reference desk was, but 4 percent proved by their later answers that they

TABLE 2

COMBINED SAMPLE'S ANSWERS TO QUESTION 1

Ever used Regenstein?		
Yes	98	100%
No	0	0%

How often last month?		
Frequency of use	Number	Percentage
0-4	49	50.0
5-9	10	10.2
10-14	8	8.2
15-19	7	7.1
20-24	3	3.1
25-29	6	6.1
30 or more	15	15.3
Total	98	100

Ever use other libraries?		
Library	Number	Percentage
Yes, unspecified	3	3.1
Harper	34	34.7
Eckhart	11	11.2
Chemistry	2	2.0
Billings	6	6.1
Law	6	6.1
SSA	5	5.1
Art	2	2.0
None of these	25	25.5
Other	11	11.2
Total	105	107

did know and had used the reference collections or interlibrary loan. We also found that the 18 percent who did not know where the reference department is knew considerably less about its services than the rest of the sample did; these results are discussed below. Thirty-four percent of the respondents have never consulted the reference staff. The answers to the second part of question 3 indicate a lower level of use of reference services than that found by the Student Advisory Committee survey, which found the "average user" appearing at the reference desk once a month; we note again however, that their sample was biased toward heavy library users. In response to a challenging open question, "In your estimation, what does the reference department do?" 22 percent said that they did not know, were

TABLE 3

COMBINED SAMPLE'S ANSWERS TO QUESTIONS 2-4

Hard to find reference desk?		
	Number	Percentage
Yes	27	27.6
No	35	35.7
No opinion	36	36.7
Total	98	100

What does reference dept. do?		
	Number	Percentage
Don't know	22	22.4
Keeps reference collection	22	22.4
Helps find articles, books	46	46.9
Gives information	24	24.5
Other	4	4.1
Total	118	120

Do you know where it is?		
Yes	80	82%
No	18	18%

Ever used reference?		
Yes	65	66%
No	33	34%

How often last month?		
	Number	Percentage
0	75	76.5
1	10	10.2
2	8	8.2
3	0	0
4	1	1
5	2	2
6 or more	2	2
Total	98	100

not sure, had no idea, etc., but the others suggested largely accurate answers which fell broadly into three catagories: maintaining a reference collection, helping the user find books or articles which he could not find himself, and giving information or answers to question. A number of people gave more than one of these answers, so that the total number of responses to question 7 was 118, rather than 98. A few students had the reference department confused with the reserve room.

The responses to the fifteen parts of question 6, shown in table 4, are very important for this study: they indicate how familiar University of Chicago students are with the services of the reference department. A rather low level of

TABLE 4

COMBINED SAMPLE'S ANSWERS TO QUESTION 6

Services	Yes		No		Not Sure	
	No.	%	No.	%	No.	%
Help with card catalog	68	69	3	3	27	28
Would find useful	71	72	21	21	6	6
Help with indexes, abstracts, etc.	69	70	3	3	26	27
Would find useful	88	90	8	8	2	2
Direct to reference tools elsewhere	71	72	1	1	26	27
Would find useful	82	84	9	9	7	7
Addresses or phone numbers	29	30	5	5	64	65
Would find useful	52	53	33	34	13	13
Book reviews	36	37	5	5	57	58
Would find useful	52	53	44	45	2	2
Help in finding periodicals	77	79	5	5	16	16
Would find useful	95	97	3	3	0	0
Bibliography for thesis*	1	1	59	60	38	39
Would find useful	14	14	77	79	7	7
Factual question	41	42	25	26	32	33
Would find useful	37	38	56	57	5	5
Service by telephone	41	42	9	9	48	49
Would find useful	72	73	20	20	6	6
Resume-writing*	2	2	75	77	20	21
Would find useful	6	6	81	84	10	10
Search other libraries for materials	73	74	0	0	25	26
Would find useful	82	84	15	15	1	1
Letter or pass to other libraries	43	44	4	4	51	52
Would find useful	86	88	8	8	4	4
Borrow materials--Interlibrary loan	53	54	5	5	40	41
Would find useful	78	80	15	15	5	5
Machine-readable data bases*	16	16	8	8	67	68
Would find useful	28	29	47	48	16	16
Orientation tours	73	74	2	2	23	23
Would find useful	75	77	13	13	10	10
Medline	7	7				
Would find useful	7	7				

*Services not provided

awareness of many services is evident. Some services, such as helping a student find periodicals, giving orientation tours, determining whether other libraries have desired materials, and directing a student to reference tools elsewhere in the library, are known to roughly three-fourths of the students; fewer students know that they can receive help in using indexes, abstracts, and other reference tools, help in using the card catalog, or interlibrary loan services; considerably fewer than half of the students are aware that the reference staff will provide a letter or pass to other libraries, help with a factual question, service by telephone, and access to book reviews and addresses of people or institutions. Figure 1 illustrates which services are best known and which have the highest level of usefulness to the respondents; it is evident that in a number of cases a large number of people expressed a desire to make use of an available service which only a small number of people now know exists, although "desired" and "will actually use" can be two different things. In every case except that of help in answering a factual question, the number of people who want a specific service is greater than the number of people who know that it is available. It is interesting to note that 97 percent of the sample feel that they need help in locating periodicals in the library. At least five people feel sure that there is a public periodicals catalog at Regenstein; there is not.

Table 5 shows that in response to the open question, "Can you tell me how you learned about the existence of the

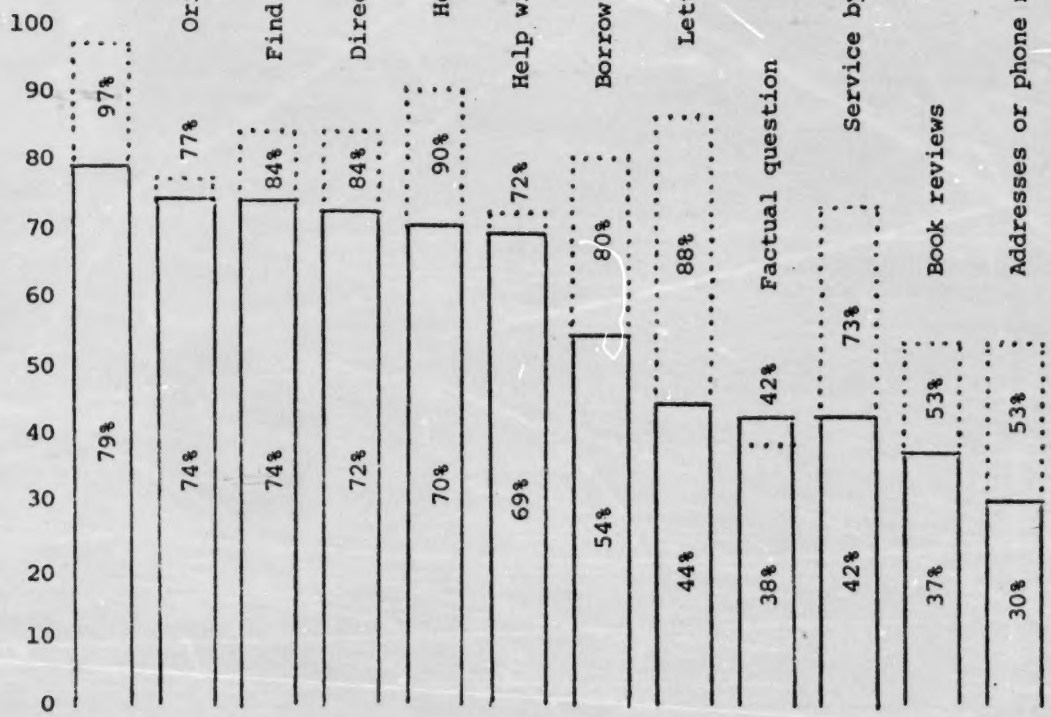

Fig. 1. Overall awareness of and desire for twelve services.

TABLE 5

COMBINED SAMPLE'S ANSWERS TO QUESTIONS 7-8

How did you learn about reference department?		
	Number	Percent
Sign	3	3.1
Library information	2	2.0
Just ran into it	18	18.4
Professor or student	8	8.2
Expected to find one	33	33.7
Tour	10	10.2
Asked other library staff	20	20.4
Knows staff	5	5.1
Not sure	4	4.1
Didn't find	8	8.2
Total	111	113

Comments	
	Number
Reference favorable	20
Reference unfavorable	4
Regenstein favorable	9
Regenstein unfavorable	23
Praise for specific person	1
Complaint about specific person	1
Other	6
No comment	27
Total	91

Specific Complaints*	
Government documents	2
Periodicals	9
Guidebooks and signs	14

*Also included above.

reference department?" people provided a number of methods by which they said that they found the department. It is rather striking that only three people saw a sign directing them to the reference desk and that only two people read about the department in the library handbook or user information bulle-

tins. The lack of explanatory or directional graphics in the Regenstein Library has been discussed in many quarters. These comments reveal the impact of the graphics on my respondents: one of the three people who saw a sign said, "I saw the desk and the people and activity, and then I saw a very small sign"; another said, "I was standing by the card catalog, looking straight up at the ceiling, and I saw a sign." The largest catagory of answers was from a group of people who said rather vaguely that they had used libraries extensively before and that they "expected" to find a reference department. The next largest group asked a question of someone else on the library staff, usually someone at circulation, someone filing cards at the catalog, or someone at exit control, and was referred to reference: "I asked a guard where the encyclopedias were and he told me to ask at the reference desk." The third largest group ran into the department fortuitously: "I was wandering around the catalog, and I figured those people over there must be doing something--I was never formally informed." Others were informed by a professor or another student, took a tour of the library which pointed out the reference desk, or else knew a member of the library staff.

The comments elicited by the last question showed a great range of concerns and attitudes. Favorable comments about the reference staff, such as "I have had good experiences with them--they helped me find the name of a nineteenth-century periodical when I only knew the abbreviation," or, "The people I talked to were very helpful--they went out of their way to

find out about a citation for me," were gratifying, but there were also a few comments such as, "We had a difficult time looking for some government publications--the people there did not seem to know how to get at them, and I didn't know either--it's not a very efficient set-up." Favorable comments about the Regenstein in general mentioned its excellent collections and good atmosphere for study, whereas unfavorable comments mentioned its poor collections and uncongenial atmosphere for study. There were complaints about the library being too cold and too hot and too noisy and too sepulchral. One member of the reference staff was mentioned by name unfavorably, another favorably. Comments falling into the "Other" catagory were fascinating although not directly relevant to this study: they included a theory about why the carpet in Regenstein wears out more quickly in some places than others and what can be done about it, a theory that what students believe to be the sound of the heating system is really "white noise" piped in to render the students docile, and a dinner invitation for the interviewer. Three types of specific complaints stand out: complaints about the number and quality of guidebooks and signs, complaints about the way in which periodicals are organized in Regenstein, and complaints about the organization of government documents in the library. Most of these specific complaints were made by graduate students in the humanities and social sciences. Here is one comment about the lack of signs and library information:

> Maybe there should be a central sign telling you where to ask questions . . . I wish it was clearer how to use the

> library; I don't know how to proceed, where to go. I've picked up their written material but it's not definite enough. There should be some introductory service for incoming students; I took a tour but they threw a lot at us all at once, I couldn't take it all in. When I went to use the library I was still confused.

Another comment:

> Reference ought to be more clearly recognizable. I would like to know whom you can ask about what.

Complaints about the organization of periodicals ranged from "Why isn't there a periodicals catalog? That would be extremely useful," to, "I can't tell you over the telephone what I think of the way they hide magazines in that library." The number of spontaneous grievances about periodical organization, taken together with the extremely high percentage of people who feel that they need help in locating them, indicates an area of particular concern for the library.

In table 6 the data on student awareness of reference services is broken down by student category. Cummulated data for all of the undergraduates as a group, as well as all of the graduate students and all of the professional school students are also given. Fourteen people who had changed their addresses and phone numbers before their interviews and were unusually hard to reach were also considered as a separate group to determine whether this peripatetic group of students had in common characteristics of library use or awareness which differentiated them from the rest of the population; the eighteen people who did not know where the reference desk was were also treated as a separate group.

As a measure of difference among the groups I used

TABLE 6

PERCENT AWARENESS OF AND DESIRE FOR TWELVE SERVICES

	Complete sample-98	Undergraduates-27	Grad. students-36	Professional Schools-35	Changed addresses-14	People who don't know where ref. dept. is-18
Help with card catalog	69/72	63/78	75/75	69/66	64/71	50/78
Help with indexes, abstracts, etc. . .	70/90	56/93	72/92	80/86	57/93	44/89
Direct to ref. tools elsewhere . .	72/84	60/78	78/81	77/91	79/36	39/78
Addresses or phone numbers	30/53	26/44	17/58	46/54	43/64	6/56
Book reviews	37/53	22/56	42/61	43/43	57/64	28/50
Help in finding periodicals	79/97	63/100	81/92	89/100	64/100	50/100
Factual questions . .	42/38	41/30	31/42	54/40	50/50	39/39
Service by phone . . .	42/73	30/63	42/92	51/63	36/50	22/50
Find out if other libraries have . . .	74/84	60/93	92/92	69/69	71/71	61/94
Letter or pass to other libraries . .	44/48	41/89	39/94	51/80	36/86	28/83
Borrow materials-Interlib. loan	54/80	30/82	78/81	49/77	57/86	33/89
Orientation tours . .	74/77	52/70	81/92	86/66	79/86	39/72

NOTE: 69/72 means that 69 percent are aware of a service but 72 percent would like to use it.

Freshman-9	Undergrads. Humanities-3	Undergrads. Sciences-7	Undergrads. Social Sciences-8	Grads. Sciences-6	Grads. Humanities-12	Grads. Social Sciences-18	Business School-9
44/56	67/100	71/100	75/75	67/100	100/67	61/67	56/67
56/78	33/100	71/100	50/100	67/100	83/67	67/100	56/100
56/78	0/33	71/100	75/75	33/67	92/58	83/100	67/100
0/33	0/100	71/14	25/63	0/100	25/58	17/44	22/33
22/56	0/100	29/29	25/63	50/67	67/50	22/67	44/44
56/100	33/100	100/100	50/100	67/100	75/83	89/94	89/100
67/33	0/0	57/71	13/0	0/33	58/50	22/39	22/33
22/78	67/100	29/71	25/25	67/83	42/100	33/89	33/56
44/78	33/100	100/100	50/100	100/100	92/100	94/83	78/56
22/67	0/100	71/100	50/100	67/100	50/100	22/89	78/78
22/67	33/33	43/100	25/100	67/100	75/100	83/61	67/78
33/56	33/100	86/57	50/88	33/100	100/100	83/83	78/56

TABLE 6--Continued

	Divinity School-4	Law School-6	Medical School- 5	Graduate Library School-5	Social Service Administration-6
Help with card catalog	100/100	100/67	40/0	60/60	67/100
Help with indexes, abstracts, etc. . .	100/75	100/67	80/60	60/100	100/100
Direct to ref. tools elsewhere . .	100/75	100/100	80/60	60/100	67/100
Addresses or phone numbers	50/50	67/67	40/80	80/80	33/33
Book reviews	50/25	33/33	40/40	60/80	33/33
Help in finding periodicals	100/100	67/100	100/100	80/100	100/100
Factual questions . .	75/25	67/50	40/40	80/60	67/33
Service by phone . . .	75/100	33/0	40/100	80/80	67/67
Find out if other libraries have . . .	25/100	100/100	40/40	80/100	67/35
Letter or pass to other libraries . .	50/100	33/67	40/80	60/100	33/67
Borrow materials-Interlib. loan . . .	50/100	33/67	40/100	100/100	0/33
Orientation tours . .	100/50	100/100	80/0	100/80	67/100

their overall scores on the fifteen questions within question 6 calculated as the total number of correct answers given by members of a group divided by the total number of possible correct answers. A perfect score would involve knowing that twelve of the services are provided and also knowing that the other three are not provided. Table 7 makes it possible to compare the scores of the various groups: the sample as a whole answered 56 percent of the questions correctly, the professional school students and graduate students did slightly better, and the undergraduates did slightly worse. Crude statistical tests showed the undergraduates' score to be significantly lower than that of the rest of the sample, and the professional school students' score to be significantly higher than that of the graduate students. It is curious that the graduate students express more of a desire for most services than the professional students do but are less aware of them. The fourteen people whose addresses changed had a score very close to that of the combined sample; this result gives some confidence that my data may also be representative of those students whom I could not reach. The eighteen people who did not know where the reference desk was had a score of 38 percent, considerably lower than the combined sample's score; ten of these people were undergraduates, four were graduate students, and four were professional students. Noting the surprising number of students in this group, I analyzed the group's composition more closely and found a high percentage of freshmen, graduate students in the sciences, the group with the least experience with the Reg-

TABLE 7

INDIVIDUAL GROUPS' PERCENTAGE
OF "CORRECT ANSWERS"

Complete sample	56%
Professional Schools	63
Graduate students	58
Undergraduates	44
Changed Addresses	58
People who don't know where reference department is	38
Graduate Library School	71
Divinity School	71
Law School	68
Grad. students-Humanities	66
Undergrads.-Sciences	65
Social Service Administration	62
Medical School	61
Business School	57
Grad. students-Social Sciences	55
Grad. students-Sciences	52
Undergrads.-Social Sciences	41
Undergrads.-Humanities	33
Freshmen	33

enstein, and students in their first quarter of study. The Graduate Library School and the Divinity School scored the highest with 71 percent correct, followed closely by the Law School and the graduate students in the humanities; the undergraduates in the humanities and the freshmen scored the lowest at 33 percent.

In order to determine whether people who scored high were simply saying "yes" to every question, I plotted the number of correct "yes" answers of each respondent as a function of the number of correct "no" answers in figure 2. It is clear that the people who got all or most of the "yes" answers cor-

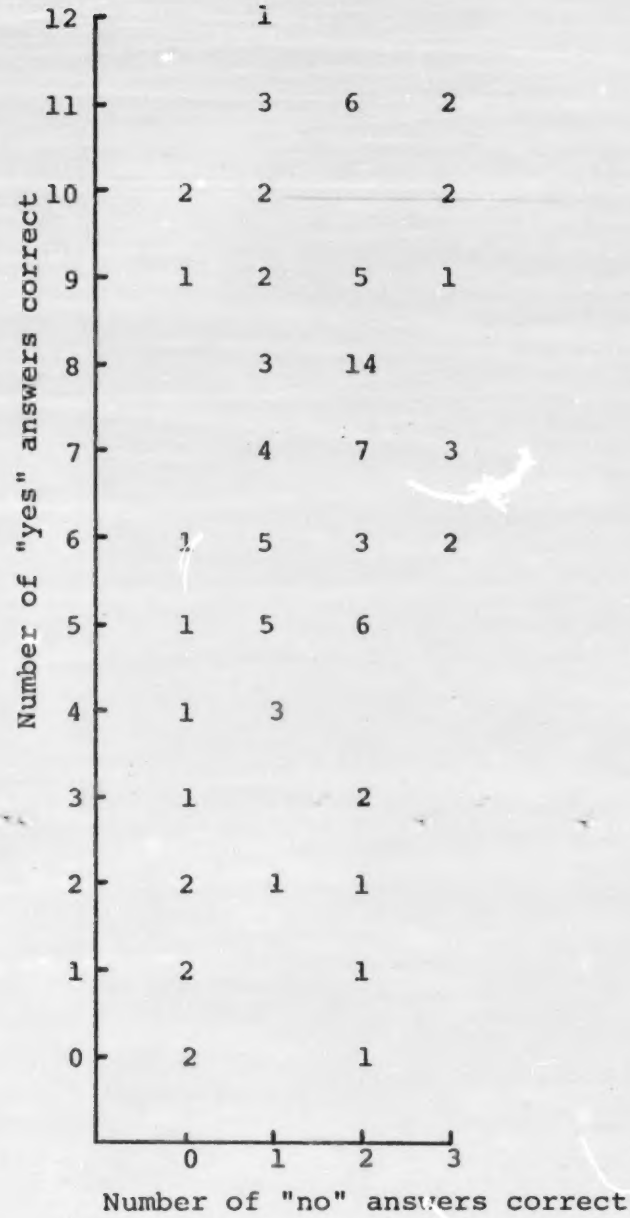

Fig. 2. Number of correct "yes" answers as a function of number of correct "no" answers.

rect were not simply saying "yes" indiscriminately: there is no element in the extreme upper left corner of the graph, as there would be if someone said "yes" to everything. There are, however, two people who said "not sure" to every question, represented by the two elements in the extreme lower left corner of the graph. No one in the sample answered every question correctly, although one person in a pretest of the interview did; there are, however, a considerable number of elements near the upper right corner, indicating people who knew a great deal about what to expect and what not to expect from the reference department.

When only the "yes" and "no" answers are examined, to the exclusion of the "not sure" answers, a different picture appears. When the respondents actually ventured a definite answer instead of a "not sure," they were right most of the time, as table 8 shows.

TABLE 8

PERCENTAGE OF "CORRECT ANSWERS" WHEN A DEFINITE ANSWER WAS VENTURED

	Correct	Questions answered definitely
Combined sample	91%	62%
Undergraduates	88	50
Graduate students	92	64
Professional school students	91	69

Undergraduates attempted a definite answer less often than the other groups, and did least well when they did offer a definite answer, but all groups answered correctly most of the time when

a "yes" or "no" answer was given. Figure 3 shows the results of plotting percentage of correct attempted "yes" answers against the percentage of correct attempted "no" answers. The low number of elements in the upper left corner shows that most respondents were not simply saying "yes" to all questions.

	Less than 50% of attempted "No's" correct	50% or more of attempted "No's" correct
50% or more of attempted "Yes's" correct	2	70
Less than 50% of attempted "Yes's" correct	0	1

Fig. 3. Percent of attempted "Yes" answers correct against percent of attempted "No" answers correct.

The general impression left by this study is that many students are not familiar with or are uncertain about the information services provided by the library, but are mostly pleased by the quality of the services when they have discovered and used them. Those students who are better-informed seem to be well served, but others are not being served at all.

CHAPTER V

DISCUSSION

If it is true that many people do not use the reference department because they do not know that it exists or what its services are, then it might be reasonable for the library to undertake a publicity campaign informing potential users of the assistance available to them and to provide library graphics and informational materials that were prominent, clear, and widely disseminated. This study shows that many people who express a need for various reference services are indeed unaware that such services are available: if everyone who needed existing services knew about them, an already busy staff would be swamped with further demands upon their time, and queueing problems at the reference desk would increase. It would be interesting to see a technical discussion of the effects that the increased numbers implied by the expressed levels of need would have upon the length of lines at the desk and the amount of time a person could expect to have to spend in that line. It should be mentioned here that only students were considered in this study; faculty, staff, and visiting scholars are also an important part of the reference clientele, and I cannot speak definitively about their levels of information or demand.

One answer could be an increase in the size of the

reference staff, in conjunction with a vigorous program of public information and improved graphics, but this potential solution brings up the ubiquitous problem of limited and shrinking library funding. The need for reference staff would have to be considered in the light of the need for increases in the book and journal budgets, the need for technical services personnel, and the needs of every other department, operation, and program of the library. In a library as large and complex as the Regenstein, public services staff will always be of the utmost importance, but the need for reference staff must be balanced against all of the library's other needs. Although the staff at its present size could serve more people by reducing the quality of service or by dropping some of its present services, I believe that the currently existing services mentioned in this study are all necessary and appropriate functions of a university library reference department; this view is upheld by the number of students who considered the services useful to their work. One measure which could extend the efficiency of a small staff is the use of trained professionals from other departments of the library at the reference desk during particularly busy periods.

It is possible, on the other hand, that increased awareness of reference services will not cause a lasting increase of great proportions in the demand on the services of the staff; as new users learn how to use reference tools and the bibliographic apparatus of the library efficiently, they may become more self-sufficient in library use and consult the reference

staff at a later point in the information-seeking process. New users of interlibrary loan, for example, take a great deal of staff time in verifying their requests, filling out initial forms, etc., but returning users often have learned to do most of their own verification, saving a considerable amount of staff time.

The results of this study are important for departments of the library other than reference; students' complaints about the way in which periodicals are organized in Regenstein, the lack of a public periodicals catalog, the organization of government documents, the inadequacy of orientation tours in teaching efficient library use, and the number and quality of directional graphics indicate areas of concern beyond the scope of the reference department. Other universities as well may benefit from studies of a similar design to investigate student awareness and use of their information services; this is an area in need of further evaluation and discussion.

APPENDIX

TABLE 9

INDIVIDUAL GROUPS' FREQUENCY OF REGENSTEIN LIBRARY USE

	Uses per month						
	0-4	5-9	10-14	15-19	20-24	25-29	30 or more
Undergraduates	16	1	4	3	1	0	2
Freshmen	7	0	0	2	0	0	0
Humanities	3	0	0	0	0	0	0
Science	5	0	0	1	1	0	0
Social Science	1	1	4	0	0	0	2
Graduate Students	16	4	3	0	1	4	8
Humanities	1	4	3	0	0	0	4
Science	6	0	0	0	0	0	0
Social Science	9	0	0	0	1	4	4
Professional Schools	17	5	1	4	1	2	5
Business	1	1	1	2	0	0	4
Divinity	2	0	0	1	0	1	0
Law	6	0	0	0	0	0	0
Medicine	3	2	0	0	0	0	0
GLS	1	0	0	1	1	1	1
SSA	4	2	0	0	0	0	0
Changed addresses	5	2	1	0	1	1	4

TABLE 10

RESPONDENTS IN EACH GROUP USING OTHER LIBRARIES

	No other library	Yes, unspecified	Harper	Eckhart	Chemistry	Billings	Law	SSA	Art	Other
Undergraduates	4	0	16	7	2	0	0	0	0	2
Freshmen	4	0	5	0	0	0	0	0	0	0
Humanities	0	0	2	0	0	0	0	0	0	2
Science	0	0	0	7	2	0	0	0	0	0
Social Science	0	0	8	0	0	0	0	0	0	0
Graduate Students	13	3	12	2	0	1	0	1	2	6
Humanities	5	1	4	0	0	0	0	0	1	2
Science	0	2	0	2	0	1	0	0	0	1
Social Science	8	0	8	0	0	0	0	1	1	3
Professional Schools	8	0	7	2	0	5	6	5	0	3
Business	2	0	6	2	0	0	0	0	0	0
Divinity	3	0	0	0	0	0	0	0	0	1
Law	0	0	0	0	0	0	6	0	0	0
Medicine	0	0	0	0	0	5	0	0	0	0
GLS	2	0	1	0	0	0	0	0	0	2
SSA	1	0	0	0	0	0	0	5	0	0
Changed addresses	3	0	6	0	0	1	3	1	0	0

TABLE 11

INDIVIDUAL GROUPS' ANSWERS TO QUESTION 2

	Is it hard to find the reference desk?			Do you know where it is?	
	Yes	No	No Opinion	Yes	No
Undergraduates	10	7	10	17	10
Freshmen	2	0	7	5	4
Humanities	1	1	1	3	0
Science	4	2	1	4	3
Social Science	3	4	1	5	3
Graduate Students	11	14	11	32	4
Humanities	2	8	2	12	0
Science	3	0	3	2	4
Social Science	6	6	6	18	0
Professional Schools	6	14	15	31	4
Business	2	1	6	8	1
Divinity	0	2	2	4	0
Law	2	0	4	4	2
Medicine	1	2	2	4	1
GLS	1	4	0	5	0
SSA	0	5	1	6	0
Changed addresses	5	5	4	12	2

TABLE 12

INDIVIDUAL GROUPS' ANSWERS TO QUESTION 3

	Ever used reference?		How often last month?						
	Yes	No	0	1	2	3	4	5	6 or more
Undergraduates	11	16	26	1	0	0	0	0	0
Freshmen	2	7	9	0	0	0	0	0	0
Humanities	3	0	3	0	0	0	0	0	0
Science	2	5	6	1	0	0	0	0	0
Social Science	4	4	8	0	0	0	0	0	0
Graduate Students	26	10	25	7	4	0	0	0	0
Humanities	7	5	9	1	1	1	0	0	0
Science	2	4	4	2	0	0	0	0	0
Social Science	17	1	12	4	2	0	0	0	0
Professional Schools	28	7	24	2	5	0	1	2	2
Business	7	2	7	2	0	0	0	0	0
Divinity	4	0	3	0	1	0	0	0	0
Law	2	4	4	0	2	0	0	0	0
Medicine	4	1	5	0	0	0	0	0	0
GLS	5	0	1	0	1	0	0	1	2
SSA	6	0	4	0	0	0	1	1	0
Changed addresses	8	6	9	1	2	0	0	0	2

TABLE 13

INDIVIDUAL GROUPS' ANSWERS TO QUESTION 4

	What does the reference department do?				
	Don't know	Keeps ref. collection	Helps find books, art.	Gives information	Other
Undergraduates	9	10	6	6	1
Freshmen	3	4	2	2	1
Humanities	0	2	1	0	0
Science	2	2	1	2	0
Social Science	4	2	2	2	0
Graduate Students	7	11	15	13	1
Humanities	2	4	6	7	0
Science	2	2	2	0	1
Social Science	3	5	7	6	0
Professional Schools	6	1	25	5	2
Business	2	0	6	1	1
Divinity	1	1	2	0	0
Law	2	0	4	0	1
Medicine	1	0	4	0	0
GLS	0	0	3	4	0
SSA	0	0	6	0	0
Changed addresses	4	4	8	3	0

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